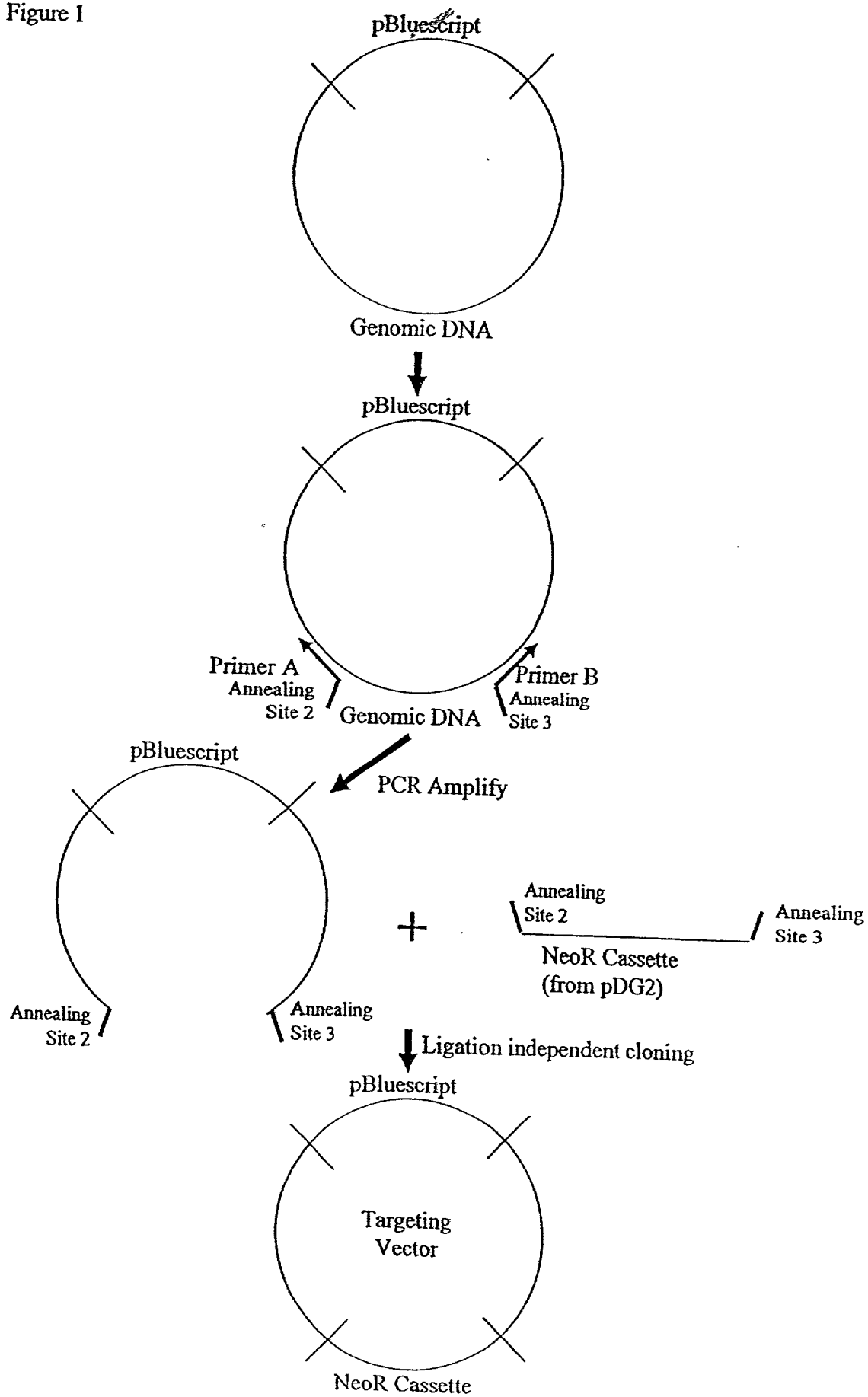


Figure 1



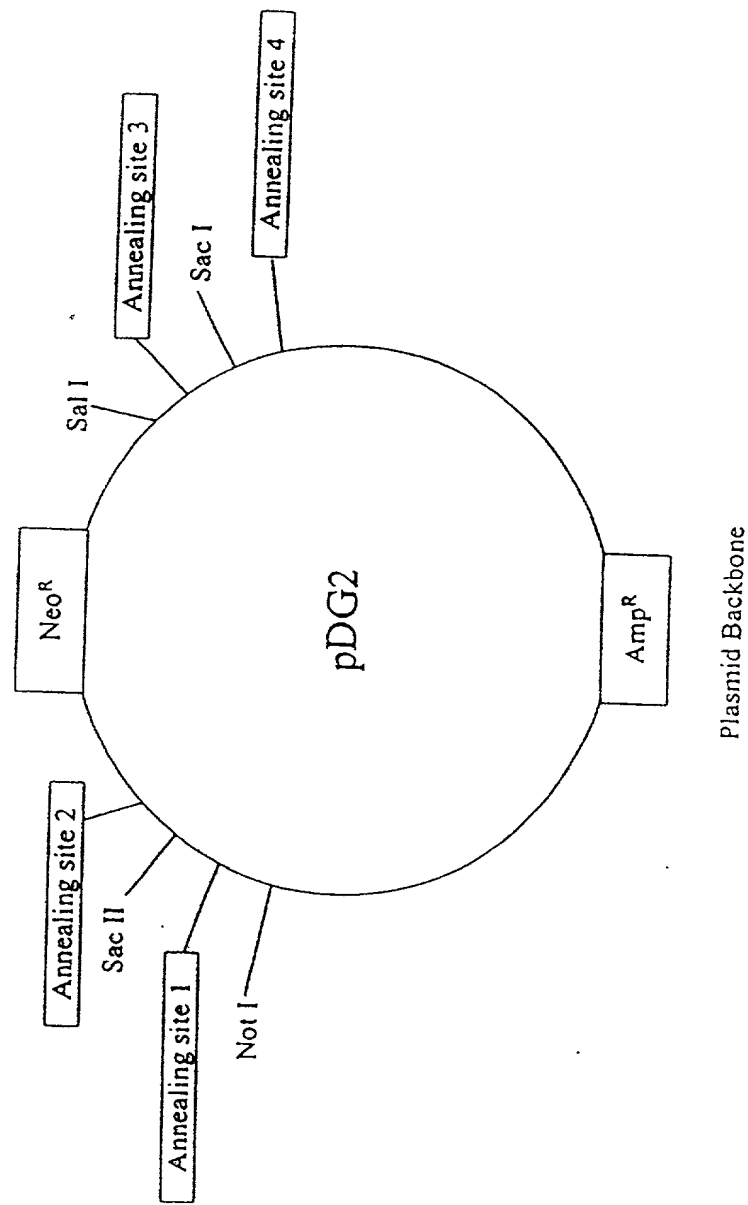


FIGURE 2A

FIGURE 2B

pDG2:

GTTAACTACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATA
 TGTATCCGCTCATGAGACAATAACCCGTATAAATGCTTCAATAATATTGAAAAGGAAGAGTATGAGTATTCAACATTTTC
 CGTGTGCGCCCTTATTCCTTTTTCGCGCAATTTGCCTTCTGTTTTCGCTCACCAGAAACCGTGGTGAAGTAAAGAA
 TGCTGAAGATCAGTTGGGTGCAGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTCGCC
 CCGAAGAACGTTCTCCATGATGAGCACTTTTAAAGTCTGCTATGTGGCGCGGTATTATCCCGTGTGACGCCGGGCAA
 GAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTACAGAAAAGCATCTTACGGA
 TGGCATGACAGTAAGAGAATTATGCAGTGTGCCATAACCATGAGTGATAAAGTGGCGCAACTTACTTCTGACAAACGA
 TCGGAGGACCGAAGGAGCTAACCGCTTTTTCGACAAATGCGGGATCATGTAAGTGCCTTGATCGTTGGGAACCGGAG
 CTGAATGAAGCCATACCAAACGAGCGGTGACACCAAGATGCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAAAC
 TGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGACGAGCACCTTCTGC
 GCTCGGCCCTTCGGCTGGTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGACGCA
 CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGAGTCAGGCAACTATGGATGAACGAAATAG
 ACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAAGTGTGACACCAAGTTTACTCATATATACTTTAGATTG
 ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAAATTTTAAATTGTAAACGTTAATA
 TTTTGTAAAAATTCGCGTTAAATTTTGTAAATCAGCTCATTTTAAACCAATAGGCGGAAATCGGCAAAATCCCTTAT
 AAATCAAAGAATAGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGAACAAGAGTCCACTATTAAAGAAGCTGGAGTCT
 CAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTCGGGT
 CGAGGTGCGGTAAAGCACTAAATCGGAACCCCTAAAGGGAGCCCCCGATTAGAGCTTGACGGGAAAGCGAACGTTGGCGA
 GAAAGGAAGGGAAGAAAGCGAAAGGAGCGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAAACCACACA
 CCGCGCGCGCTTAATGCGCGCTACAGGGCGCGTAAAGGATCTAGGTGAAGATCCTTTTGATAATCTCATGACCAAAA
 TCCTTTAAGCTGAGTTTTCGTTCCACTGAGCGTACAGCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTT
 TCGCGCTAATCTGCTGCTTGCAACAAAAAACCCGCTACACAGCGGTGGTTGTTTGGCCGATCAAGAGCTACCAAC
 TCTTTTTCCGAAGGTAAGTGGCTTACGACAGCGCGATACCAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACC
 ACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACAGTGGCTGCTGCCAGTGGCGATAAG
 TCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGTCCGGCTGAACGGGGGGTTCGTGCAC
 ACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTGAATACCTACAGCGTGAAGTATGAGAAAGCGCCACGCTTCCCG
 AAGGGGAAGGCGGAGGATCCGTAAGCGGCGAGGTGCGAACAGGAGAGCGCACAGGAGGAGCTTCCAGGGGGAAC
 GCGTGGTATCTTTATAGTCTGCTCGGTTTCGCCACCTCTGACTTGAGCGTGGATTTTGTGATGCTCGTACAGGGGGCG
 GAGCCTATGGAAGAACCGCAGCAACGCGCCTTTTACGGTTCTGCGCTTTTGTGCGCTTTTGTCTCATGTAAATGTG
 AGTTAGCTCACTATTAGGCACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATA
 ACAATTTACACAGGAAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAAC
 AATGTGCTCCTCTTTGGCTTGCTTCCGCGGCCAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTGCT
 AGCGCGCGCCGAATTCCTGAGGATTTCGAGGGCCCTCGAGGTCAATTCACCGGTAGGGGAGGCGCTTTCCCAAGG
 CAGTCTGGAGCATGCGCTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCTCTGGCTCGCACACATTCCACA
 TCCACCGGTAGCGCAACCGGCTCCGTTCTTGGTGGCCCTTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTC
 CCCCCCGCCCCGAGCTCGCGTGTGAGGACGTGACAAATGGAAGTAGACGCTCTCACTAGTCTCGTGCAGATGGACAG
 CACCGCTGAGCAATGGAAGCGGTAGGCTTTGGGCGAGCGCCAAATAGCAGCTTGTCTCTTCTGCTTTCTGGGCTCAGA
 GGCTGGGAAGGGTGGGTTCGCGGGCGGGCTCAGGGCGGGCTCAGGGCGGGCGGGCGGGCGGGCTTCCGAGGCC
 GGCATTCTCGACGCTTCAAAGCGCAGCTCTGCGCGCTGTTCTCCTCTCTCTCATCTCCGGCCTTTCGACCTGCAGC
 CAATATGGGATCGGCCATTGAACAAGATGGATTGACGCGAGGTTCTCGGCGCGTTGGGTGGAGAGGCTATTGGCTATG
 ACTGGGCAACAAGACAAATCGGCTGCTGTATGCGCGCGTTCGCGCTGTGAGCGAGGGCGCCCGTCTTTTTTGTG
 AAGACCGACCTGTCCGGTGCCTGAATGAATGACGAGGAGGCGAGCGCGCTATCGTGGCTGGCCACGAGGGCGTTC
 TTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGAAGGACTGGCTGCTATTGGGCGAAGTCCCGGGGCGAGATCTCC
 TGTCTCTCACTTGTCTCTGCGGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCT
 ACCTGCCCCATTGACACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGCTTGTGCTGATCAGGA
 TGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAATGTTCCGCGAGCTCAAGGCGCGCATGCCGACGCGCATG
 ATCTCGTCTGACCATGGCGATGCCTGCTTGCAGAAATCATGGTGGAAAATGGCCGCTTTTCTGGATTATCGACTGT
 GCGCGGCTGGGTGTTGGCGGACCGCTATCAGGACATAGGCTTGGCTACCCGCTGATATTGCTGAAGAGCTTGGCGGCGAATG
 GGCTGACCGCTTCTCGTCTTACGTTATCGGCTTCCGCTTCCGATTCCGAGCGCATCGCTTCTATCGCTTCTTGACGAGT
 TCTTCTGAGGGGATCGATCCGCTCTGTAAGTCTGCAGAAATGATGATCTATTAAACAATAAGATGTCCACTAAAATGG
 AAGTTTTCTGTCTACTTTGTAAAGAGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGG
 GTGGGGTGGGGTGGGATTAGATAAATGCTGCTTTACTGAAGGCTCTTACTATTGCTTTATGATAATGTTTCATAG
 TTGGATATCAATAATTAACAAGCAAAACCAATTAAGGGCCAGCTCATTCCTCCACTCATGATCTATAGATCTATAGA
 TCTCTCGTGGGATCATTGTTTTCTCTGATTCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTGAGTTTCA
 TAGCCTGAAGAAGAGATCAGCAGCTCTGTTCCACATACACTTCACTCTAGTATTGTTTGGCAAGTTCTAATTCAT
 CAGAAGCTGACTTAGATCTGGATCCGCGCCAGTAGGCGCTCGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTG
 TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAATTAAGGCGGGCCGTAACCTCTAGTCAAGGCTTAAGTGAAGT
 TATTACGGAAGTGGCGTGGTTTTACAAGCTGTGACTGGGAAACCTGGCGTTACCAACTTAATCGCTTGCAGCACA
 TCCCCCTTTCCGCAAGTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCTGAATGGCG
 AATGGCGCTTGGTTGTAATAAGCCCGCTTCGGCGGCTTTTTTTT

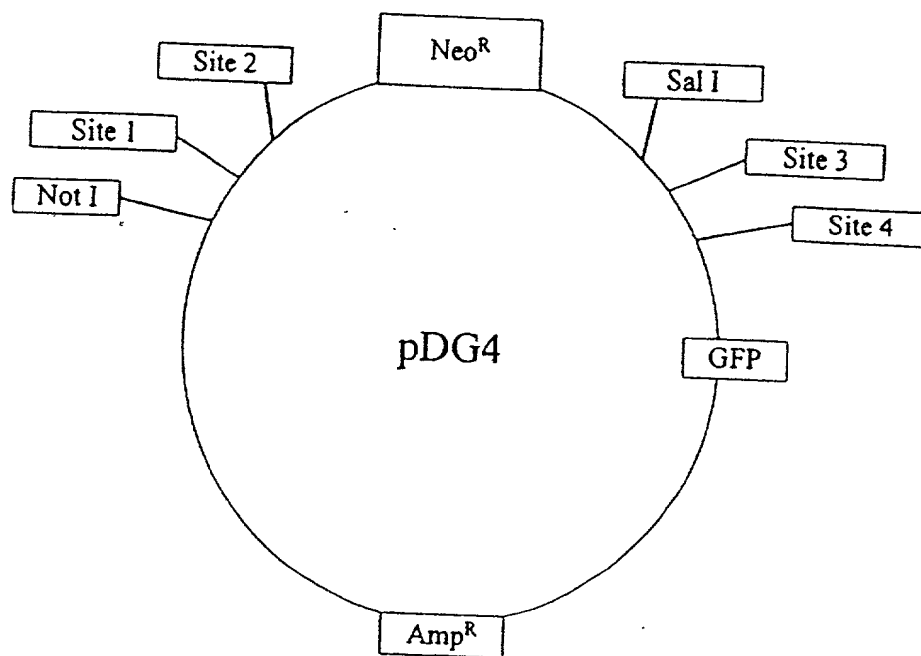


FIGURE 3A

FIGURE 3B

pDG4:

GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAAATTACGGTAAATGG
 CCGCCTGGCTGACCGCCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
 CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGGCAGTACATCAAGTGATCATATGCCAAGT
 ACGCCCCCTATTGACGTCAATGACGGAATATGGCCCGCTGGCATTAGCCCACTACATGACCTTATGGACTTTCCTAC
 TTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGATAGC
 GGTTTGACTCACGGGGATTTCAAGTCTCCACCCATTGACGTCAATGGGAGTTTGTTTTGGCACCATAATCAACGGGAC
 TTTCCAAAATGTCGTAACTCCGCCCATTTGACGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCATATATAAGCAG
 AGCTGGTTTAGTGAACCGTCAGATCCGCTAGCGCTACCGGTGCGCACCATGGTGAGCAAGGGCGAGGAGCTGTTTACCGG
 GGTGGTGCCCATCTGGTTCGAGCTGACGGGACGTAAACGGCCACAAGTTTACGGTGTCCGGCGAGGGCGAGGGCGATG
 CCACCTACGGCAAGCTGACCTGAAGTTTCTGACCAACCGGCAAGCTGCCCGTCCCTGGCCACCTCGTGACCACT
 CTGACCTACGGCGTGCACTGCTTACGGCGTACCCCGACCATGAAGCAGCAGCACTTCTTCAAGTCCGCCATGCCGA
 AGGCTAGTCCAGGAGCGCACCATCTTCTTCAAGGACGACCGCAACTACAAGACCCGCGCCGAGGTGAAGTTTCGAGGGCG
 ACACCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCTGGGGCAACAGCTGGAGTAC
 AACTACAACAGCCACAACGTCTATATCATGGCCGACAGCAGAAGAACGGCATCAAGGTGAAGTTCAAGATCCGCCACAA
 CATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCGCAGAACACCCCATCGGGCAGCGCCCGTGTCTGCTGCCCG
 ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGCGATCAGATGGTCTGTGAGGTTT
 GTGACCGCCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTCCGGAATCAGATCCACCGGATCTAGATAAATGTAT
 CATAATCAGCCATACCACTTTGTAGAGGTTTACTTGTCTTAAAAAACCTCCACACCTCCCTGAACTGAAACATA
 AAATGAATGCAATTGTGTGTGTTAACTGTTTATTGAGCTTATAATGGTTACAAATAAAGCAATAGCATCAAAATTTT
 ACAAATAAAGCATTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAACTCATCAATGTATCTTAACGCAACTACGTCA
 GGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTGTTTATTTTCTAAATACATTCAATATGTATCCGCTCAT
 GAGACAATAACCTGATAAATGCTTCAATAATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTGCGCCTTA
 TTCCTTTTTTGGCGCATTTTTCCTTCTGTTTGTGTCACCCAGAAACGCTGGTGAAAGTAAAGATCTGAAGATCAG
 TTGGGTGACAGGAGTGGTTTACATCGAAGCTGGATCTCAACAGCGGTAAGATCTTGAAGTTTTTCGCCCGAAGAACGTTT
 TCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGTATTATCCCGTGTGACGCGGGCAAGAGCAACTCGGTC
 GCCGCATACACTATTCTCAGAAAGACTTGGTTGAGTACTACCACTGACAGAAAGCATCTTACGGATGGCATGACAGTA
 AGAGAATTATGCACTGCTGCCATAACCATGAGTGATAAAGTGGCCCACTTACTTCTGACAACGATCGGAGGACCGAA
 GGAGCTAAACCGCTTTTTTGCACAACATGGGGATCATGTAAGTCTGCTGATCGTTGGGAACCGGAGCTGAATGAAGCCA
 TACCAAAACGAGCGTGACACCAAGTGCCTGTAGCAATGGCAACAGTTGCGCAACTATTAACTGGCGAACTACTT
 ACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGGCGATAAAGTTGACAGGACCACTTCTGCGCTCGGCCCTTCC
 GGCTGGCTGGTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGTATCATTGAGCACTGGGGCCAGATG
 GTAAGCCCTCCCGTATCGTAGTTATCTACAGCAGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAG
 ATAGGTGCTCACTGATTAAGCATTTGTAAGTGTGACAGCAAGTTTACTCATATATACCTTAGATTGATTACCCCGGTT
 GATAATCAGAAAGCCCAAAACAGGAAGATTGTATAAGCAAAATTTTAAATGTAAGCGTTTAAATTTGTTAAATTT
 CGCGTTAAATTTTGTAAATCAGCTCATTTTTTAAACCAATAGGCGGAAATCGGCAAAATCCCTTATAAATCAAAGAAT
 AGCCCGAGATAGGGTTGAGTGTGTTTCAGTTTGGAAACAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGG
 CGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCAAAATCAAGTTTTTGGGGTCGAGGTGCGGTAA
 AGCACTAAATCGGAACCTTAAAGGGAGCCCCGATTAGAGCTTGACGGGAAAGCGAAGTGGCGAGAAAGGAAGGGAA
 GAAAGCAAGAGGAGCGGGCGTAGGGCGTGGCAAGTGTAGCGGTACGCTGCGGTAAACCGTAAACCGCCGCGCTTA
 ATGCGCGCTACAGGGCGGTAAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAAACGTGA
 GTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCT
 GGTGCTTGCAAAACAAAAAACCCCGCTACCAAGCGGTGTTTGTGTTGCGGATCAAGAGCTACCAACTCTTTTTCCGAAG
 GTAAGTGGCTTACGAGAGCGCAGATACCAATCTGTTCTTAGTGAGCGGTAGGTAGGCCCACTTCAAGAACTC
 TGTAGCACCGCTACATACCTCGCTCTGCTAATCTGTTTACAGTGGCTGCTGCCAGTGGCGATAAGTGTCTTACCG
 GGTGAGCTCAAGACGATAGTTACCGGATAAGCGCAGCGCTCGGCTGAAACGGGGGTTCTGTGCACACAGCCCAAGTTG
 GAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGC
 GGACAGGTATCCGGTAAGCGGCGGGTCCGAACAGGAGAGCGCAGAGGGAGCTTCCAGGGGAAACCGCTGGTATCTTT
 ATAGTCTGTGCGGTTTTCGCCACCTCTGACTTGAGCGTCAATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAA
 AACGCCAGCAACGCGGCTTTTTACGGTTCTGGCCTTTTGTGCTGCTTTTGTCTCATGTATGTAGTTAGCTCACTC
 ATTAGGCACCCAGGCTTTTACCTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTTGTAGCGGATAACAATTTTCAACA
 GGAAACAGCTATGACCATGATTACGCCAAGTACGTAATACGACTCACTAGGCGGCGGTTTAAACAAATGTGCTCCTCT
 TTGGCTTGCTTCCGCGGGCCAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTGTAGCGGCGCGCGA
 ATCTCTGAGGATTCGAGGGCCCTGCAAGTCAATTTACCGGGTAGGGGAGGCGCTTTTCCCAAGGCAAGTCTGGAGCAT
 GCGCTTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCCTCTGGCTCGCACACATCCACATCCACCGGTAGCG
 CCAACCGGCTCCGTTCTTTGGTGGCCCCCTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTCCCGCCCGCCCGC
 AGCTCGCGTGTGACAGCGTGACAAATGGAAGTAGCACCTTCACTAGTCTCGTGACAGTGGACAGCAGCGCTGAGCAA
 TGGAAAGCGGTAGGCTTTGGGGCAGCGGCCAATAGCAGCTTGTCTCTTCTGCTTCTGGGCTCAGAGGCTGGGAAGGGG
 TGGGTCCGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGCGGGCGGAAGGTCTCCCGAGGCGCGGATTCTCGCAC
 GCTTCAAAGCGCACGTCTGCGCGCTGTTCTCTCTTCTCATCTCCGGGCTTTCGACCTGACGCCAATATGGGATCG
 GCCATTGAACAAGATGGATTGCACGAGGTTCTCGGCGCTTGGGTGGAGAGGCTATTCCGCTATGACTGGGCACAACA
 GACAATCGGCTGCTCTGATGCGCGGTTTCCGGCTGTGACGCGAGGGCGCGCGGTTCTTTTGTCAAGACCGACCTGT
 CCGGTGCCCTGAATGAAGTGCAGGACGAGGCGAGCGGCTATCGTGGTGGCCACGAGGGCGTTCCTTGGCGAGCTGTG
 CTCGACGTTGTCACTGAAGCGGGAAGGACTGGCTGCTATTGGGCGAAGTGGCGGGCAGGATCTCTGTCTCATCTCACCT

TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTG
ACCACCAAGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGCTCGCGCCAGCCGAAC TGTTCGCCAGGCTCAAGGCGCGCATGCCGACGGCGATGATCTCGTCGTGAC
CCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATT CATCGACTGTGGCCGGCTGGGTG
TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
CTCGTGCTTTACGGTATCGCCGCTCCCGATT CGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGA
TCGATCCGTCCTGTAAGTCTGCAGAAATTGATGATCTATTAAACAATAAAGATGTCCACTAAAATGGAAGTTTTTCCTGT
CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGGGTGGGGGTGGGGT
GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA
TTTAAACAGCAAAACCAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT
CATTGTTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTCAGTTTCATAGCCTGAAGAAC
GAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATTCATCAGAAGCTGACTC
TAGATCTGGATCCGGCCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGTCTCGCTCTGTGTCGGTTGAGCTCG
ACGACACAGGACACGCAAAATTAATTAAGGCCGGCCCGTACCCTCTAGTCAAGGCCTTAAGTGAGTCGTATTACGGACTGG
CCGTGTTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTTAATCGCCTTGCGACACATCCCCCTTTGCGC
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCGC
TTGGTAATAAAGCCCGCTTCGGCGGGCTTTTTTTT

FIGURE 3B (Continued)

Annealing site	Sequence	Sequence after digestion
1	5' tgtgctcctcttttggcttgcttccaa... 3' 3' acacgaggagaaacccaacgaagggt... 5'	5' tgtgctcctcttttggcttgcttccaa... 3' 3' tt... 5'
2	5' ctgggttcttgtctggcttggcccaa... 3' 3' gaccaagaacagaccgaaccgggtt... 5'	5' ctgggttcttgtctggcttggcccaa... 3' 3' tt... 5'
3	5' ggtcctcgctctgtgtccgttgaa... 3' 3' ccaggagcgagacacaggaactt... 5'	5' ggtcctcgctctgtgtccgttgaa... 3' 3' tt... 5'
4	5' ttbgcgtgtcctgtgtcgtcgaa... 3' 3' aaacgcacaggacacagcaggtt... 5'	5' ttbgcgtgtcctgtgtcgtcgaa... 3' 3' tt... 5'

FIGURE 4

Annealing site	Sequence	Sequence after digestion
1	5' AATgtgctcctcttcttggcttgcttCCGC 3' 3' Ttacacgaggagaaaccgaacgaagg 5'	5' AA 3' Ttacacgaggagaaaccgaacgaagg 5'
2	5' AActggttcttctgtctggttggtggCCCGC 3' 3' Ttgaccaagaagaacagaccgaaccggg 5'	5' AA 3' Ttgaccaagaacagaccgaaccggg 5'
3	5' AAggtcctcgcctctgtgtccggttGAGCT 3' 3' Ttccaggagcgagacacacagggaac 5'	5' AA 3' Ttccaggagcgagacacacagggaac 5'
4	5' AAttgctgtgtcctgtgtcgtcGAGCT 3' 3' Ttaaacgcacaggacacacagcagc 5'	5' AA 3' Ttaaacgcacaggacacacagcagc 5'

FIGURE 5

FIGURE 6

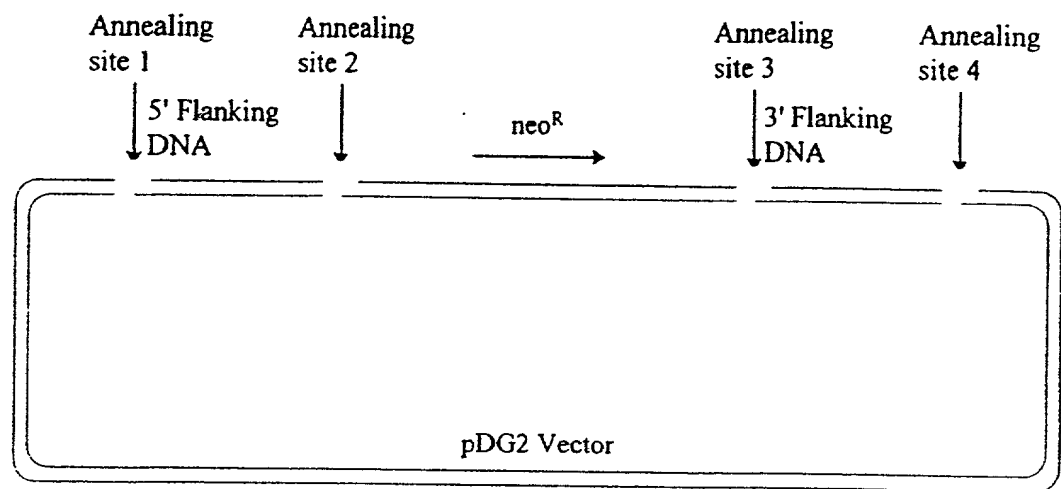
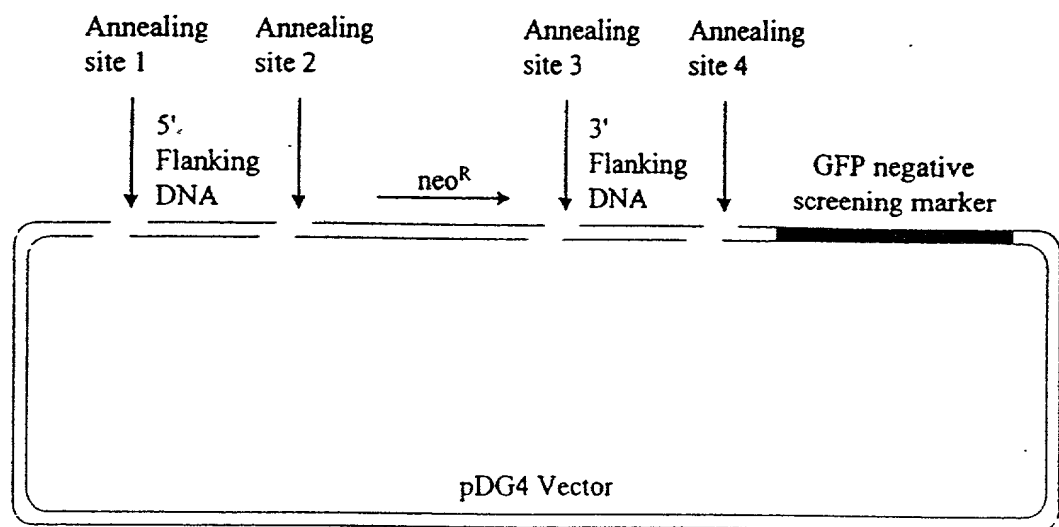


FIGURE 7



TCGGTTGGGCCCAGCAACTTCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAG
 TGGCTGCCTCCACTATGCCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGG
 AGAGGATCCAACAGGTGTGGGCCCCCTCGCTCCAGTGCCGAGTGTGTGGGGACAGCAGCAGTGGGAAACAT
 TATGGCATCTATGCCTGCAATGGCTGCAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACA
 GGTGCCAAGTCGGGGCAGGGATGTGCCCAGTGGATAAGGCCCATCGCAATCAGTGCCAGGCCTGCCGGCT
 GAAGAAGTGCTTACAAGCAGGCATGAACCAAGATGCTGTGCAGAATGAGCGCCAACCTCGGAGCATGGCT
 CAGGTCCACCTGGATGCCATGGAAACAGGCAGTGACCCCGATCAGAACCAGTGGTAGCCTCTCCTGCTC
 TGGCAGGGCCCAGTCCCCGGGGCCCCACGTCTGTGTCTGCAACCAGAGCCATGGGCCACCACTTTATGGC
 CAGCCTTATCACCGCCGAAACTTGTGTCTAACTGGAGCCAGAGGACGCTGAAGAGAATATTGATGTCACC
 AGCAATGACCCGAGTTCCCCGCATCCCCCTGCAGTCTGGATGGCATCCATGAGACATCTGCTCGCCTGC
 TCTTCATGGCTGTCAAATGGGCCAAAAAATTGCCTGTGTTTTCCAACCTGCCTTTCCGGGACCAGGTGAT
 CTTGCTGGAAGAGGCATGGAATGAGCTTTTCTTCTTGGAGCCATACAGTGGTCTCTGCCCTTGGACAGC
 TGCCCACTGCTGGCACCACCTGAGGCGTCCGGCAGCTCTCAGGGCAGGCTGGCCTTGGCCAGTGCAGAGA
 CGCGCTTCTGTCAGGAAACCATCTCCCGGTTCCGAGCTCTGGCAGTGGATCCCACAGAGTTTGCCTGCCT
 GAAGGCCCTTGGTCTCTTCAAACTGAAACACGAGGCCTGAAGGATCCTGAGCACGTGGAGGCTTTGCAG
 GACCAGTCCCAGGTGATGCTAAGCCAGCATAGCAAGGCTCACCACCCAGCCAGCCTGTGAGGTTTGGGA
 AATTGCTCCTCCTGCTCCCATCTTTGAGGTTCTCAGCGCTGAGCGCATTGAGCTTCTCTTCTTCAGAAA
 GACCATAGGGAACACTCCGATGGAGAAGCTCCTGTGTGACATGTTCAAAAACCTAGTTGGGAGTGCCAAGT
 GTCCACAGGCACCCAGGGGGGCAGCACATCTTAGAAGCTAAATAGTTCCCTGCCTTTCTCAGCCAGTAAT
 TCCACATTGAGGTATTCCTACCTAGCAGAAATTTCTCCCAAAATATATTATTGGCATATTCATTGCCATC
 CTAATCTTAATACCCCTAACTCTGCTTGGGCAGTAGAATGCATGGATGCGTTGTTATATTCATAGGAGAA
 ACAGCTTTGGCAA
 (SEQ ID NO: 19)

Targeting Vector (5' arm; 200 bp flanking neo insert):

AGACTGAAAGACAGACAGACAGACAGAGGGTTAAAGATGGATGCATCGGTTGGGCCCAGCAACT
 TCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAGTGGCTGCCTCCACTATG
 CCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGGAGAGGATCCAAC
 (SEQ ID NO: 20)

Targeting Vector (3' arm; 200 bp flanking neo insert):

CTCCAGTGCCGAGTGTTTGGGGACAGCAGCAGTGGGAAACATTATGGCATCTATGCCTGCAATGGCTG
 CAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACAGGTGCCACAGCTCTGCCGGCCTG
 CCCCCGTGTGCTAGCACGGGTGGAGGGCGTTCAGGGAAAGCGGAAGACGAGACCAGGGCAAACA
 (SEQ ID NO: 21)

FIG. 8